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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,175	11/01/2001	Peter H. Seeberger	MTV-018.02	7902
25181	7590	12/03/2004	EXAMINER	
FOLEY HOAG, LLP PATENT GROUP, WORLD TRADE CENTER WEST 155 SEAPORT BLVD BOSTON, MA 02110			KHARE, DEVESH	
			ART UNIT	PAPER NUMBER
			1623	

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/033,175

Applicant(s)

SEEBERGER ET AL.

Examiner

Devesh Khare

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,23 and 42-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 42-44 is/are allowed.
- 6) ☒ Claim(s) 1,23 and 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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Applicant's remarks filed on 08/26/2004 are acknowledged. Claims 2-22 and 24-41 have been cancelled.

The examiner withdraws Buchwald et al. (U.S. Patent 6,693,178) ('178) reference in the 35 U.S.C. 103(a) rejections of the Office Action dated 6/30/2004, in response to applicant's remarks that the '178 patent is not available as prior art under 103(a) because the '178 patent does not qualify as prior art under 102(e).

Claims 1, 23 and 42-45 are pending in this application.

**Minor objections**

Claim 23 is objected to because of the following informalities:

(1) The following abbreviations, should be written out with the words representing each letter in the abbreviation for each of:

-OTIPS; and -OPMB.

(2) A period is missing at the end of claim 23.

Appropriate correction is required.

**35 U.S.C. 103(a) rejection**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

Claims **1, 23 and 45** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sabesan (U.S. Patent 5,095,123) of record.

The applicants' claims are directed toward optionally substituted glycosyl phosphate compounds of formula 1 and 2 (claims 1 and 45) wherein "O" is linked at C-1. Claims 1 and 45 differ in selecting R=aryl. Dependent limitations include the compounds of claim 23 represented by the structures of glucose, galactose and lactose.

Sabesan teaches the glycosyl phosphate trimesters and salts of specific sugars using various reagents (col.1, lines 45-50). In col.3, lines 42-65, the glycosyl phosphate triesters of formula I and II phosphorylated at C-1 are disclosed.

The disclosure in col. 5, Reaction scheme 1, the compounds obtained from the phosphorylation of the hexopyranose wherein phosphate group is substituted with phenyl group, is within the scope of the instant claims 1 and 23. Furthermore, Sabesan discloses the derivatives of D-glucose and D-galactose (col.4, lines 59-60). See especially the compounds disclosed in col. 9, examples 2, 3 and 5. It would have been obvious to person having ordinary skill in the art at the time the invention was made, produce glycosyl compounds phosphorylated at C-1 having selected values for variables in the carbohydrate moiety and in the phosphate ester moiety from among those taught by Sabesan. The motivation for doing so is provided by Sabesan which suggests that such compounds were useful as glycosyl donors for the synthesis of structurally diverse nucleotide sugar derivatives used for biological investigation of

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various enzymes (col.1, lines 10-30). Applicant has not demonstrated any criticality or unexpected result, which stems from selection of particular values for the variable.

**Rejection Maintained**

Rejection of claims 1,23 and 45 under 35 U.S.C. 103(a) is maintained for the reasons of record.

Applicant's arguments traversing the rejection of claims 1,23 and 45 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

**Response to Arguments**

Applicants argue, "the compounds described in reaction scheme 1 and examples 2,3, and 5 of U.S. Patent 5,095,123 are diphenyl phosphates, which compounds do not fall within the scope of pending claims 1 and 23". It is noted that in claims 1 and 23 the substituents R and R' can be aryl or heteroaryl. Sabesan discloses in col. 5, Reaction scheme 1, the compounds obtained from the phosphorylation of the hexopyranose wherein phosphate group is substituted with phenyl group, is within the scope of the instant claims 1 and 23. Furthermore, Sabesan discloses the derivatives of D-glucose and D-galactose (col.4, lines 59-60).

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The rejection of claims **42-44** stated in the office action dated 03/06/2003 under the judicially-created doctrine of obviousness-type double patenting as being unpatentable

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over claims 17-19 of U.S. Patent 6,323,339, has been overcome through applicants' terminal disclaimer filed over U.S. Patent no. 6,323,339.

**2. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

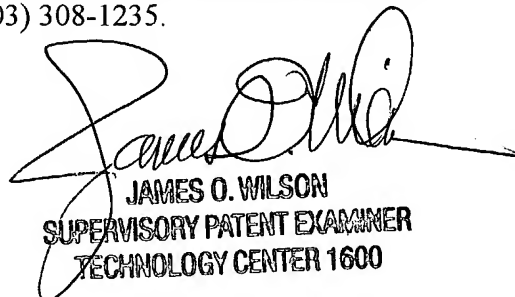
Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Devesh Khare whose telephone number is (571)272-0653. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, Supervisory Patent Examiner, Art Unit 1623 can be reached at (571)272-0661. The official fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-4556 or 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Devesh Khare, Ph.D., J.D.  
Art Unit 1623  
November 15, 2004

  
**JAMES O. WILSON**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1600**